

**Version with Markings to Show Changes**

**In the Claims**

1        1.    [Amended]    A piezoelectric sensor [array] for detecting acoustic seismic data  
2        comprising:  
3        a piezoelectric film placed on a surface of a relatively incompressible substrate; and  
4        an area of relatively compressible substrate formed in the surface of the relatively  
5        incompressible substrate adjacent the piezoelectric film forming a[n] discrete area of  
6        increased sensitivity in the stretch direction and thickness dimension in the  
7        piezoelectric film adjacent the relatively compressible substrate to impinging acoustic  
8        pressure waves.

1        2.    [Amended]    The piezoelectric sensor [array] of claim 1 further comprising:  
2        a plurality[an array] of areas of relatively compressible substrate formed in the  
3        surface of the relatively incompressible substrate forming a[n] continuous line array  
4        of discrete areas of increased sensitivity in the piezoelectric film to impinging  
5        acoustic pressure waves.

1        3.    [Amended]    The piezoelectric sensor [array] of claim 2, further comprising:  
2        a two-dimensional array of areas of relatively compressible substrate formed in the  
3        surface of the relatively incompressible substrate forming a two-dimensional array of  
4        areas of increased sensitivity in the piezoelectric film to impinging acoustic pressure  
5        waves.

1 4. [Amended] The piezoelectric sensor[array] of claim 3, further comprising:  
2 the two-dimensional array of areas of increased sensitivity are formed into a three-  
3 dimensional shape to form a three-dimensional array of areas of increased sensitivity  
4 [in the piezoelectric film] to impinging acoustic pressure waves in the piezoelectric  
5 film.

1 5. [Amended] The piezoelectric sensor[array] of claim 2 further comprising:  
2 variations in at least one of a [wherein the] size and location of the areas of increased  
3 sensitivity [are varied] to shape the beam pattern of the piezoelectric array.

1 6. [Amended] The piezoelectric sensor [array] of claim 2 further comprising:  
2 variations in at least one of a [wherein the] size and location of the areas of increased  
3 sensitivity [are varied] to shape the spectral response of the piezoelectric array.

1 7. [Amended] The piezoelectric sensor [array] of claim 2 further comprising:  
2 variations in a [wherein the] ratio of the total surface area of the areas of increased  
3 sensitivity to the total surface area of the relatively incompressible substrate [are  
4 varied] to shape the beam pattern of the piezoelectric array.

1 8. [Amended] The piezoelectric sensor[array] of claim 2 further comprising:  
2 variations in a [wherein the] ratio of the total surface area of the areas of increased  
3 sensitivity to the total surface area of the relatively incompressible substrate are  
4 varied to determine the spectral response of the piezoelectric array.

1        9.     [Amended]    The piezoelectric sensor[array] of claim 3 further comprising:  
2            a [wherein the] shape of the array [is] formed to determine a [the] beam pattern of the  
3            continuous line array.

1        10.    [Amended]    The piezoelectric sensor[array] of claim 3 further comprising:  
2            a [wherein the] shape of the array [is] formed to determine the spectral response of  
3            the array.

1        11.    [Amended]    The piezoelectric sensor[array] of claim 2 further comprising:  
2            [wherein the piezoelectric response can be monitored with] a single set of leads, [one  
3            positive and one negative] for monitoring the response of the piezoelectric element.

1        12.    [Amended]    The piezoelectric sensor[array] of claim 3 further comprising:  
2            variations in at least one of [wherein the] size and location of the areas of increased  
3            sensitivity [are varied] to shape the beam pattern of the piezoelectric array.

1        13.    [Amended]    The piezoelectric sensor[array] of claim 3 further comprising:  
2            variations in at least one of a [wherein the] size and location of the areas of increased  
3            sensitivity [are varied] to shape the spectral response of the piezoelectric array.

1        14.    [Amended]    The piezoelectric sensor[array] of claim 3 further comprising:

2        variations in a [wherein the] ratio of the total surface area of the areas of increased  
3        sensitivity to the total surface area of the relatively incompressible substrate [are  
4        varied] to shape the beam pattern of the piezoelectric array.

1        15.    [Amended]    The piezoelectric sensor[array] of claim 3 further comprising:  
2        variations in a [wherein the] ratio of the total surface area of the areas of increased  
3        sensitivity to the total surface area of the relatively incompressible substrate [are  
4        varied] to determine the spectral response of the piezoelectric array.

1        16.    [Amended]    The piezoelectric sensor[array] of claim 4 further comprising:  
2        a [wherein the] shape of the array [is] formed to determine the beam pattern of the  
3        array.

1        17.    [Amended]    The piezoelectric sensor [array] of claim 4 further comprising:  
2        variations in a [wherein the] shape of the array [is formed] to determine the spectral  
3        response of the array.

1        18.    [Amended]    The piezoelectric sensor [array] of claim 4 further comprising:  
2        [wherein the piezoelectric response can be monitored with] a single set of leads, [one  
3        positive and one negative] for monitoring the piezoelectric sensor response.

1        19.    [Amended]    The piezoelectric sensor [array] of claim 4 further comprising  
2        variations in at least one of a [wherein the] size and location of the areas of increased

sensitivity [are] varied to shape the beam pattern of the piezoelectric array.

20. [Amended] The piezoelectric sensor[array] of claim 4 further comprising:  
variations in at least one of a [wherein the] size and location of the areas of increased  
sensitivity are varied to shape the spectral response of the piezoelectric array.

21. [Amended] The piezoelectric sensor[array] of claim 4 further comprising:  
variations in a [wherein the] ratio of a [the] total surface area of the areas of increased  
sensitivity to [the] a total surface area of the relatively incompressible substrate [are  
varied] to shape [the] a beam pattern of the piezoelectric array.

22. [Amended] The piezoelectric sensor[array] of claim 4 further comprising:  
variations in a [wherein the] ratio of [the] a total surface area of the areas of increased  
sensitivity to [the] a total surface area of the relatively incompressible substrate [are  
varied] to determine the spectral response of the piezoelectric array.

23. [Amended] The piezoelectric sensor [array] of claim 4 further comprising  
[wherein the piezoelectric response can be monitored with] a single set of leads,  
[one positive and one negative] for monitoring a response of the piezoelectric  
sensor.